

Serial Number: 10/089,320BCRF Processing Date: 8/12/2003  
Edited by: AS  
Verified by: AS (STIC staff)

- ENTERED**
- ☐ Changed a file from non-ASCII to ASCII.
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☒ Inserted mandatory headings, specifically: <2137 Artificial Sequence in Seqs 159-161
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



PCT10

## RAW SEQUENCE LISTING

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:05

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

4 <110> APPLICANT: KYOWA HAKKO KOGYO CO., LTD.  
 6 <120> TITLE OF INVENTION: Shear Stress-Responsive Genes  
 8 <130> FILE REFERENCE: 1241.22  
 10 <140> CURRENT APPLICATION NUMBER: US/10/089,320B  
 C--> 12 <141> CURRENT FILING DATE: 2003-03-28  
 14 <150> PRIOR APPLICATION NUMBER: JP 1999-280976  
 16 <151> PRIOR FILING DATE: 1999-10-01  
 18 <160> NUMBER OF SEQ ID NOS: 181  
 20 <170> SOFTWARE: PatentIn Ver. 2.0  
 22 <210> SEQ ID NO: 1  
 24 <211> LENGTH: 3817  
 26 <212> TYPE: DNA  
 28 <213> ORGANISM: Homo sapiens  
 30 <220> FEATURE:  
 32 <221> NAME/KEY: CDS  
 34 <222> LOCATION: (440)..(1930)  
 36 <400> SEQUENCE: 1

P.6

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38 gaattcgggt ggagtcctga aggagggcct gatgtcttca tcattctcaa attcttgtaa 60
40 gctctgcgtc gggtgaaacc agacaaagcc gcgagcccag ggatgggagc acgcggggga 120
42 cggcctgccg gcggggacga cagcattgctg cctgggtgca gcagtgtgctg tctcggggaa 180
44 gggaagatat tttaaggcgt gtctgagcag acggggaggc ttttccaaac ccaggcagct 240
46 tcgtggcgtg tgcggtttcg acccggtcac acaaagcttc agcatgtcat gtgaggacgg 300
48 tcggggccctg aaaggaacgc tctcggaatt ggccgcggaa accgatctgc ccgttgtgtt 360
50 tgtgaaacag agaaagatag gcggccatgg tccaaccttg aaggcttctc aggagggcag 420
52 acttcaaaaag ctactaaaa atg aac ggc cct gaa gat ctt ccc aag tcc tat 472
54                               Met Asn Gly Pro Glu Asp Leu Pro Lys Ser Tyr
56                               1           5           10
58 gac tat gac ctt atc atc att gga ggt ggc tca gga ggt ctg gca gct 520
60 Asp Tyr Asp Leu Ile Ile Ile Gly Gly Gly Ser Gly Gly Leu Ala Ala
62                               15           20           25
64 gct aag gag gca gcc caa tat ggc aag aag gtg atg gtc ctg gac ttt 568
66 Ala Lys Glu Ala Ala Gln Tyr Gly Lys Lys Val Met Val Leu Asp Phe
68                               30           35           40
70 gtc act ccc acc cct ctt gga act aga tgg ggt ctt gga gga aca tgt 616
72 Val Thr Pro Thr Pro Leu Gly Thr Arg Trp Gly Leu Gly Gly Thr Cys
74                               45           50           55
76 gtg aat gtg ggt tgc ata cct aaa aaa ctg atg cat caa gca gct ttg 664
78 Val Asn Val Gly Cys Ile Pro Lys Lys Leu Met His Gln Ala Ala Leu
80 60           65           70           75
82 tta gga caa gcc ctg caa gac tct cga aat tat gga tgg aaa gtc gag 712
84 Leu Gly Gln Ala Leu Gln Asp Ser Arg Asn Tyr Gly Trp Lys Val Glu
86                               80           85           90
88 gag aca gtt aag cat gat tgg gac aga atg ata gaa gct gta cag aat 760
  
```

## RAW SEQUENCE LISTING

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:05

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

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90 Glu Thr Val Lys His Asp Trp Asp Arg Met Ile Glu Ala Val Gln Asn
92          95          100          105
94 cac att ggc tct ttg aat tgg ggc tac cga gta gct ctg cgg gag aaa 808
96 His Ile Gly Ser Leu Asn Trp Gly Tyr Arg Val Ala Leu Arg Glu Lys
98          110          115          120
100 aaa gtc gtc tat gag aat gct tat ggg caa ttt att ggt cct cac agg 856
102 Lys Val Val Tyr Glu Asn Ala Tyr Gly Gln Phe Ile Gly Pro His Arg
104          125          130          135
106 att aag gca aca aat aat aaa ggc aaa gaa aaa att tat tca gca gag 904
108 Ile Lys Ala Thr Asn Asn Lys Gly Lys Glu Lys Ile Tyr Ser Ala Glu
110 140          145          150          155
112 agt ttt ctc att gcc act ggt gaa aga cca cgt tac ttg ggc atc cct 952
114 Ser Phe Leu Ile Ala Thr Gly Glu Arg Pro Arg Tyr Leu Gly Ile Pro
116          160          165          170
118 ggt gac aaa gaa tac tgc atc agc agt gat gat ctt ttc tcc ttg cct 1000
120 Gly Asp Lys Glu Tyr Cys Ile Ser Ser Asp Asp Leu Phe Ser Leu Pro
122          175          180          185
124 tac tgc ccg ggt aag acc ctg gtt gtt gga gca tcc tat gtc gct ttg 1048
126 Tyr Cys Pro Gly Lys Thr Leu Val Val Gly Ala Ser Tyr Val Ala Leu
128          190          195          200
130 gag tgc gct gga ttt ctt gct ggt att ggt tta ggc gtc act gtt atg 1096
132 Glu Cys Ala Gly Phe Leu Ala Gly Ile Gly Leu Gly Val Thr Val Met
134          205          210          215
136 gtt agg tcc att ctt ctt aga gga ttt gac cag gac atg gcc aac aaa 1144
138 Val Arg Ser Ile Leu Leu Arg Gly Phe Asp Gln Asp Met Ala Asn Lys
140 220          225          230          235
142 att ggt gaa cac atg gaa gaa cat ggc atc aag ttt ata aga cag ttc 1192
144 Ile Gly Glu His Met Glu Glu His Gly Ile Lys Phe Ile Arg Gln Phe
146          240          245          250
148 gta cca att aaa gtt gaa caa att gaa gca ggg aca cca ggc cga ctc 1240
150 Val Pro Ile Lys Val Glu Gln Ile Glu Ala Gly Thr Pro Gly Arg Leu
152          255          260          265
154 aga gta gta gct cag tcc acc aat agt gag gaa atc att gaa gga gaa 1288
156 Arg Val Val Ala Gln Ser Thr Asn Ser Glu Glu Ile Ile Glu Gly Glu
158          270          275          280
160 tat aat acg gtg atg ctg gca ata gga aga gat gct tgc aca aga aaa 1336
162 Tyr Asn Thr Val Met Leu Ala Ile Gly Arg Asp Ala Cys Thr Arg Lys
164          285          290          295
166 att ggc tta gaa acc gta ggg gtg aag ata aat gaa aag act gga aaa 1384
168 Ile Gly Leu Glu Thr Val Gly Val Lys Ile Asn Glu Lys Thr Gly Lys
170 300          305          310          315
172 ata cct gtc aca gat gaa gaa cag acc aat gtg cct tac atc tat gcc 1432
174 Ile Pro Val Thr Asp Glu Glu Gln Thr Asn Val Pro Tyr Ile Tyr Ala
176          320          325          330
178 att ggc gat ata ttg gag gat aag gtg gag ctc acc cca gtt gca atc 1480
180 Ile Gly Asp Ile Leu Glu Asp Lys Val Glu Leu Thr Pro Val Ala Ile
182          335          340          345
184 cag gca gga aga ttg ctg gct cag agg ctc tat gca ggt tcc act gtc 1528
186 Gln Ala Gly Arg Leu Leu Ala Gln Arg Leu Tyr Ala Gly Ser Thr Val

```

## RAW SEQUENCE LISTING

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:05

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

```

188          350          355          360
190 aag tgt gac tat gaa aat gtt cca acc act gta ttt act cct ttg gaa 1576
192 Lys Cys Asp Tyr Glu Asn Val Pro Thr Thr Val Phe Thr Pro Leu Glu
194          365          370          375
196 tat ggt gct tgt ggc ctt tct gag gag aaa gct gtg gag aag ttt ggg 1624
198 Tyr Gly Ala Cys Gly Leu Ser Glu Glu Lys Ala Val Glu Lys Phe Gly
200 380          385          390          395
202 gaa gaa aat att gag gtt tac cat agt tac ttt tgg cca ttg gaa tgg 1672
204 Glu Glu Asn Ile Glu Val Tyr His Ser Tyr Phe Trp Pro Leu Glu Trp
206          400          405          410
208 acg att ccg tca aga gat aac aac aaa tgt tat gca aaa ata atc tgt 1720
210 Thr Ile Pro Ser Arg Asp Asn Asn Lys Cys Tyr Ala Lys Ile Ile Cys
212          415          420          425
214 aat act aaa gac aat gaa cgt gtt gtg ggc ttt cac gta ctg ggt cca 1768
216 Asn Thr Lys Asp Asn Glu Arg Val Val Gly Phe His Val Leu Gly Pro
218          430          435          440
220 aat gct gga gaa gtt aca caa ggc ttt gca gct gcg ctc aaa tgt gga 1816
222 Asn Ala Gly Glu Val Thr Gln Gly Phe Ala Ala Leu Lys Cys Gly
224          445          450          455
226 ctg acc aaa aag cag ctg gac agc aca att gga atc cac cct gtc tgt 1864
228 Leu Thr Lys Lys Gln Leu Asp Ser Thr Ile Gly Ile His Pro Val Cys
230 460          465          470          475
232 gca gag gta ttc aca aca ttg tct gtg acc aag cgc tct ggg gca agc 1912
234 Ala Glu Val Phe Thr Thr Leu Ser Val Thr Lys Arg Ser Gly Ala Ser
236          480          485          490
238 atc ctc cag gct ggc tgc tgagggttaag cccagtggtg gatgctgttg 1960
240 Ile Leu Gln Ala Gly Cys
242          495
244 ccaagactgc aaaccactgg ctcggttccg tgcccaaadc caaggcgaag ttttctagag 2020
246 ggttcttggg ctcttggcac ctgcgtgtcc tgtgcttacc accgcccgaag gcccccttgg 2080
248 atctcttggg taggagttgg tgaatagaag gcaggcagca tcacactggg gtcactgaca 2140
250 gacttgaagc tgacatttgg cagggcatcg aagggatgca tccatgaagt caccagtctc 2200
252 aagcccatgt ggtaggcggg gatggaacaa ctgtcaaadc agtttttagca tgacctttcc 2260
254 ttgtggattt tcttattctc gttgtcaagt tttctagggt tgaatttttt tcttttttct 2320
256 ccatgggtgtt aatgatatta gagatgaaaa acgttagcag ttgattttttg tccaaaagca 2380
258 agtcatggct agagtatcca tgcaagggtgt cttgttgcac ggaagggata gtttggctcc 2440
260 cttggaggct atgtaggctt gtcccgggaa agagaactgt cctgcagctg aaatggactg 2500
262 ttctttactg acctgctcag cagtttcttc tctcatatat tcccaaaaca agtacatctg 2560
264 cgatcaactc tagccaaatt tgcccctgtg tgctacatga tggatgatta ttattttaag 2620
266 gtctgtttag gaagggaat ggctacttgg ccagccattg cctggcattt ggtagtatag 2680
268 tatgattctc accattattt gtcatggagg cagacatata ccagaaatgg gggagaaaca 2740
270 gtacatatct ttctgtcttt agtttattgt gtgctggtct aagcaagctg agatcatttg 2800
272 caatgaaaaa cacgtaactt gtttaaaagt ttttctggta gcttttagctt tatgctaaaa 2860
274 aaaataatga cattgggtat ctatttcttt ctaagacata cattagtagg aaaataagtc 2920
276 ttttcatgct tatgatttag ctgttttgtg gtaattgctt tttaaaggaa gttattaata 2980
278 tcataagtta ttattaatat tttgaacaca ggtggatgtg aaggattttc atttaaaaac 3040
280 caagtggttt tgacttttct tgttgaatga acaactgtgc cttgtggaat ttttgcagaa 3100
282 gtgtttatgc tttgttagca tttcaacttg cattattata aagaggtatt aatgcctcag 3160
284 ttatgtgttt gtcaatgtac tggctgagga ttctatctca gctgtctttt ctaactgtgt 3220

```

## RAW SEQUENCE LISTING

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:05

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

```

286 aggttgagtt ttgaacacgt gcttgtggac atcagcctcc tgccagcagt tcttgaagct 3280
288 tctttttcat tctgtctact ctacctgtat ttctcagttg cagcactgag tggtaaaaat 3340
290 acattttctgg gccacctcag ggaacccatg catctgcctg gcatttaggc agcagagccc 3400
292 ctgaccgtcc cccacaggct ctgcctcacg tcctcatctc atttggtgtg gtaaagaaat 3460
294 gggaaaaggg aaaaggagag agcaattgag gcagttgacc atattcagtt ttatttattt 3520
296 atttttaatt tgtttttttc tccaagtcca ccagtctctg aaattagaac agtaggcggt 3580
298 atgagataat caggcctaata catgttgtga ttctcttttc ttagtgaggat ggaatgttct 3640
300 atccccacaa gaaggattat atcttataga cttgtcttgt tcagattctg tatttaccce 3700
302 ttttattgaa acatatacta agttccatgt atttttgta caaatcttct gaaaaaaaaa 3760
304 aaaacaatgt gaaacattaa aattaaagg cattaataat aaaaaaaaaa aaaaaaa 3817
307 <210> SEQ ID NO: 2
309 <211> LENGTH: 497
311 <212> TYPE: PRT
313 <213> ORGANISM: Homo sapiens
315 <400> SEQUENCE: 2
317 Met Asn Gly Pro Glu Asp Leu Pro Lys Ser Tyr Asp Tyr Asp Leu Ile
319 1 5 10 15
321 Ile Ile Gly Gly Ser Gly Gly Leu Ala Ala Ala Lys Glu Ala Ala
323 20 25 30
325 Gln Tyr Gly Lys Lys Val Met Val Leu Asp Phe Val Thr Pro Thr Pro
327 35 40 45
329 Leu Gly Thr Arg Trp Gly Leu Gly Gly Thr Cys Val Asn Val Gly Cys
331 50 55 60
333 Ile Pro Lys Lys Leu Met His Gln Ala Ala Leu Leu Gly Gln Ala Leu
335 65 70 75 80
337 Gln Asp Ser Arg Asn Tyr Gly Trp Lys Val Glu Glu Thr Val Lys His
339 85 90 95
341 Asp Trp Asp Arg Met Ile Glu Ala Val Gln Asn His Ile Gly Ser Leu
343 100 105 110
345 Asn Trp Gly Tyr Arg Val Ala Leu Arg Glu Lys Lys Val Val Tyr Glu
347 115 120 125
349 Asn Ala Tyr Gly Gln Phe Ile Gly Pro His Arg Ile Lys Ala Thr Asn
351 130 135 140
353 Asn Lys Gly Lys Glu Lys Ile Tyr Ser Ala Glu Ser Phe Leu Ile Ala
355 145 150 155 160
357 Thr Gly Glu Arg Pro Arg Tyr Leu Gly Ile Pro Gly Asp Lys Glu Tyr
359 165 170 175
361 Cys Ile Ser Ser Asp Asp Leu Phe Ser Leu Pro Tyr Cys Pro Gly Lys
363 180 185 190
365 Thr Leu Val Val Gly Ala Ser Tyr Val Ala Leu Glu Cys Ala Gly Phe
367 195 200 205
369 Leu Ala Gly Ile Gly Leu Gly Val Thr Val Met Val Arg Ser Ile Leu
371 210 215 220
373 Leu Arg Gly Phe Asp Gln Asp Met Ala Asn Lys Ile Gly Glu His Met
375 225 230 235 240
377 Glu Glu His Gly Ile Lys Phe Ile Arg Gln Phe Val Pro Ile Lys Val
379 245 250 255
381 Glu Gln Ile Glu Ala Gly Thr Pro Gly Arg Leu Arg Val Val Ala Gln
383 260 265 270

```

## RAW SEQUENCE LISTING

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:05

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

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385 Ser Thr Asn Ser Glu Glu Ile Ile Glu Gly Glu Tyr Asn Thr Val Met
387          275          280          285
389 Leu Ala Ile Gly Arg Asp Ala Cys Thr Arg Lys Ile Gly Leu Glu Thr
391          290          295          300
393 Val Gly Val Lys Ile Asn Glu Lys Thr Gly Lys Ile Pro Val Thr Asp
395 305          310          315          320
397 Glu Glu Gln Thr Asn Val Pro Tyr Ile Tyr Ala Ile Gly Asp Ile Leu
399          325          330          335
401 Glu Asp Lys Val Glu Leu Thr Pro Val Ala Ile Gln Ala Gly Arg Leu
403          340          345          350
405 Leu Ala Gln Arg Leu Tyr Ala Gly Ser Thr Val Lys Cys Asp Tyr Glu
407          355          360          365
409 Asn Val Pro Thr Thr Val Phe Thr Pro Leu Glu Tyr Gly Ala Cys Gly
411          370          375          380
413 Leu Ser Glu Glu Lys Ala Val Glu Lys Phe Gly Glu Glu Asn Ile Glu
415 385          390          395          400
417 Val Tyr His Ser Tyr Phe Trp Pro Leu Glu Trp Thr Ile Pro Ser Arg
419          405          410          415
421 Asp Asn Asn Lys Cys Tyr Ala Lys Ile Ile Cys Asn Thr Lys Asp Asn
423          420          425          430
425 Glu Arg Val Val Gly Phe His Val Leu Gly Pro Asn Ala Gly Glu Val
427          435          440          445
429 Thr Gln Gly Phe Ala Ala Ala Leu Lys Cys Gly Leu Thr Lys Lys Gln
431          450          455          460
433 Leu Asp Ser Thr Ile Gly Ile His Pro Val Cys Ala Glu Val Phe Thr
435 465          470          475          480
437 Thr Leu Ser Val Thr Lys Arg Ser Gly Ala Ser Ile Leu Gln Ala Gly
439          485          490          495
441 Cys
444 <210> SEQ ID NO: 3
446 <211> LENGTH: 1487
448 <212> TYPE: DNA
450 <213> ORGANISM: Homo sapiens
452 <220> FEATURE:
454 <221> NAME/KEY: CDS
456 <222> LOCATION: (6)..(938)
458 <400> SEQUENCE: 3
460 ggagc atg cgg ggc gcg gcg cgg gcg gca tgg ggg cgc gcg ggg cag ccg 50
462      Met Arg Gly Ala Ala Arg Ala Ala Trp Gly Arg Ala Gly Gln Pro
464      1          5          10          15
466 tgg ccg cga ccc ccc gcc ccg ggc ccg ccc ccg ccg ctc ccg ctg 98
468 Trp Pro Arg Pro Pro Ala Pro Gly Pro Pro Pro Pro Pro Leu Pro Leu
470      20          25          30
472 ctg ctc ctg ctc ctg gcc ggg ctg ctg ggc ggc gcg ggc gcg cag tac 146
474 Leu Leu Leu Leu Leu Ala Gly Leu Leu Gly Gly Ala Gly Ala Gln Tyr
476      35          40          45
478 tcc agc gac cgg tgc agc tgg aag ggg agc ggg ctg acg cac gag gca 194
480 Ser Ser Asp Arg Cys Ser Trp Lys Gly Ser Gly Leu Thr His Glu Ala
482      50          55          60

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 08/12/2003  
PATENT APPLICATION: US/10/089,320B      TIME: 18:57:06

Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\08122003\J089320B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:15; N Pos. 1503,1512,1538,1539,1544,1548,1559,1560,1564,1610,1611,1697  
Seq#:15; N Pos. 1698,1706,1707,1735,1750,1780,1781,1804,1805,1807,1809,1813  
Seq#:15; N Pos. 2317,2534,2726,2729,2746,2751,2785,2788,2797,2801,2813,2816  
Seq#:15; N Pos. 2827,2828,2859,2863,2864  
Seq#:67; N Pos. 1485  
Seq#:109; Xaa Pos. 49,65  
Seq#:110; Xaa Pos. 49,65  
Seq#:113; Xaa Pos. 17,18,19,31,34,35,109  
Seq#:114; Xaa Pos. 17,18,19,31,34,35,109  
Seq#:116; N Pos. 134,135  
Seq#:117; N Pos. 37  
Seq#:117; Xaa Pos. 4  
Seq#:118; Xaa Pos. 4  
Seq#:121; N Pos. 28  
Seq#:121; Xaa Pos. 9  
Seq#:122; Xaa Pos. 9  
Seq#:123; Xaa Pos. 59  
Seq#:124; Xaa Pos. 59  
Seq#:131; N Pos. 415,472  
Seq#:132; N Pos. 223,237,380,468  
Seq#:133; N Pos. 313

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:159; Line(s) 27282  
Seq#:160; Line(s) 27302  
Seq#:161; Line(s) 27322  
Seq#:162; Line(s) 27334  
Seq#:164; Line(s) 27354  
Seq#:165; Line(s) 27364  
Seq#:166; Line(s) 27374  
Seq#:167; Line(s) 27384

## VERIFICATION SUMMARY

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:06

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:2738 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15  
L:2914 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:1485  
M:341 Repeated in SeqNo=15  
L:13844 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:67  
L:13984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:1457  
L:21047 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:109  
L:21083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:435  
M:341 Repeated in SeqNo=109  
L:21346 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:110,Line#:21336  
L:21346 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:110,Line#:21344  
L:21360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110 after pos.:48  
M:341 Repeated in SeqNo=110  
L:21813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113 after pos.:96  
M:341 Repeated in SeqNo=113  
L:21976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114 after pos.:16  
M:341 Repeated in SeqNo=114  
L:22080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116 after pos.:120  
L:22123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:0  
M:341 Repeated in SeqNo=117  
L:22194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118 after pos.:0  
L:22457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121 after pos.:0  
M:341 Repeated in SeqNo=121  
L:22562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122 after pos.:0  
L:22657 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:370  
L:22700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:48  
L:23234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:131 after pos.:360  
M:341 Repeated in SeqNo=131  
L:23348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:132 after pos.:180  
M:341 Repeated in SeqNo=132  
L:23426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133 after pos.:300  
L:27333 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27336 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27343 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27346 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27353 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27356 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27363 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27366 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27373 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27376 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27383 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27386 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27394 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27397 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27494 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27541 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27544 M:283 W: Missing Blank Line separator, <400> field identifier



## VERIFICATION SUMMARY

DATE: 08/12/2003

PATENT APPLICATION: US/10/089,320B

TIME: 18:57:06

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08122003\J089320B.raw

L:27651 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27691 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27694 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27821 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27873 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27883 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27893 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27903 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27913 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27923 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27933 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27943 M:283 W: Missing Blank Line separator, <220> field identifier



PCT

## RAW SEQUENCE LISTING

DATE: 08/06/2003

PATENT APPLICATION: US/10/089,320B

TIME: 09:18:41

Input Set : A:\1241.22 sequence listing.txt

Output Set: N:\CRF4\08062003\J089320B.raw

4 <110> APPLICANT: KYOWA HAKKO KOGYO CO., LTD.  
 6 <120> TITLE OF INVENTION: Shear Stress-Responsive Genes  
 8 <130> FILE REFERENCE: 1241.22  
 10 <140> CURRENT APPLICATION NUMBER: US/10/089,320B  
 C--> 12 <141> CURRENT FILING DATE: 2003-03-28  
 14 <150> PRIOR APPLICATION NUMBER: JP 1999-280976  
 16 <151> PRIOR FILING DATE: 1999-10-01  
 18 <160> NUMBER OF SEQ ID NOS: 181  
 20 <170> SOFTWARE: PatentIn Ver. 2.0

## ERRORED SEQUENCES

Does Not Comply  
 Corrected Diskette Needed

27272 <210> SEQ ID NO: 159  
 27274 <211> LENGTH: 20  
 27276 <212> TYPE: DNA → <2137 Artificial Sequence  
 27278 <220> FEATURE:  
 27280 <223> OTHER INFORMATION: Description of the artificial sequence:an artificially synthesized primer sequence  
 E--> ~~27282 <213> ORGANISM:~~  
 27282 <400> SEQUENCE: 159  
 27284 ggaagtgtta cttctgctct 20  
 27289 <210> SEQ ID NO: 160  
 27291 <211> LENGTH: 50  
 27293 <212> TYPE: DNA → <2137 Artificial Sequence  
 27295 <220> FEATURE:  
 27297 <223> OTHER INFORMATION: Description of the artificial sequence:an artificially synthesized primer sequence  
 E--> ~~27299 <213> ORGANISM:~~  
 27299 <400> SEQUENCE: 160  
 27301 gagagagaga gagagagaga actagtctcg agtttttttt tttttttttt 50  
 27306 <210> SEQ ID NO: 161  
 27308 <211> LENGTH: 41  
 27310 <212> TYPE: DNA → <2137 Artificial Sequence  
 27312 <220> FEATURE:  
 27314 <223> OTHER INFORMATION: Description of the artificial sequence:an artificially synthesized primer sequence  
 E--> ~~27316 <213> ORGANISM:~~  
 27316 <400> SEQUENCE: 161  
 27318 gagagagaga gagagagcgg ccgcactagt cccccccccc c 41

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/089,320B

DATE: 08/06/2003  
TIME: 09:18:44

Input Set : A:\1241.22 sequence listing.txt  
Output Set: N:\CRF4\08062003\J089320B.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:159; Line(s) 27280  
Seq#:160; Line(s) 27297  
Seq#:161; Line(s) 27314  
Seq#:162; Line(s) 27325  
Seq#:163; Line(s) 27334  
Seq#:164; Line(s) 27343  
Seq#:165; Line(s) 27352  
Seq#:166; Line(s) 27361  
Seq#:167; Line(s) 27370

## VERIFICATION SUMMARY

DATE: 08/06/2003

PATENT APPLICATION: US/10/089,320B

TIME: 09:18:44

Input Set : A:\1241.22 sequence listing.txt

Output Set: N:\CRF4\08062003\J089320B.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:2738 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15  
L:2914 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:1485  
M:341 Repeated in SeqNo=15  
L:13844 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:67  
L:13984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:1457  
L:21047 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:109  
L:21083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:435  
M:341 Repeated in SeqNo=109  
L:21346 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:110,Line#:21336  
L:21346 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:110,Line#:21344  
L:21360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110 after pos.:48  
M:341 Repeated in SeqNo=110  
L:21813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113 after pos.:96  
M:341 Repeated in SeqNo=113  
L:21976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114 after pos.:16  
M:341 Repeated in SeqNo=114  
L:22080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116 after pos.:120  
L:22123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:0  
M:341 Repeated in SeqNo=117  
L:22194 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118 after pos.:0  
L:22457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121 after pos.:0  
M:341 Repeated in SeqNo=121  
L:22562 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122 after pos.:0  
L:22657 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123 after pos.:370  
L:22700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:124 after pos.:48  
L:23234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:131 after pos.:360  
M:341 Repeated in SeqNo=131  
L:23348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:132 after pos.:180  
M:341 Repeated in SeqNo=132  
L:23426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133 after pos.:300  
L:27282 M:282 E: Numeric Field Identifier Missing, <213> is required.  
L:27299 M:282 E: Numeric Field Identifier Missing, <213> is required.  
L:27316 M:282 E: Numeric Field Identifier Missing, <213> is required.  
L:27324 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27326 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27333 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27335 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27342 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27344 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27351 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27353 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27360 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27362 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27369 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27371 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27379 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27382 M:283 W: Missing Blank Line separator, <400> field identifier

**VERIFICATION SUMMARY**

DATE: 08/06/2003

PATENT APPLICATION: US/10/089,320B

TIME: 09:18:44

Input Set : A:\1241.22 sequence listing.txt

Output Set: N:\CRF4\08062003\J089320B.raw

L:27479 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27526 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27529 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27636 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27676 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27679 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27806 M:283 W: Missing Blank Line separator, <400> field identifier  
L:27858 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27868 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27878 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27888 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27898 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27908 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27918 M:283 W: Missing Blank Line separator, <220> field identifier  
L:27928 M:283 W: Missing Blank Line separator, <220> field identifier